UNITED STATES PATENT AND TRADEMARK OFFICE

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10/748,487	12/29/2003	Joseph Olakangil	134147	8737

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EXAMINER
QURESHI, AFSAR M

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 14-26* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Response to Amendment

1.   This Office action is responsive to amendment received on 11/19/2007. In light of

amendment, rejection of claims 24-25, under 35 USC 112, is withdrawn.

Response to Arguments

2.   Applicant's arguments filed on 11/19/2007 have been fully considered but they

are not persuasive.

Applicant argued, with reference to claim 1, that the limitation "selecting an action

from a plurality of actions based on the first index **and** the second index, each action

being associated with two or more indices of the plurality of indices" is not taught by

cited reference Li et al. (US 6,567,408). Similarly, the limitation, added to claim 12, "a

memory device operatively coupled to the index allocator, comprising a plurality of

actions, **each** being selected based on two or more indices from the plurality of indices"

also not disclosed by the Li reference.

Examiner, respectfully, disagrees. Given broad interpretation, Li anticipates

above limitations. Li discloses first and second string (src, dst), as discussed in the

rejection of claim 1 and further elaborates, in an improved method, of selecting, from a

plurality of rules based on first and second indexes (see col. 11, lines 10-27). Similarly,

the memory device, within ESP 24, comprises a plurality of actions selected based on

two indices (see col. 9, lines 15-20 and col. 10, lines 27-40). As to claim 23, Examiner

maintains that Yazaki discloses generating first string and second string, SIP, DIP (see

col. 15, lines 38-44 and col. 17, lines 61-65, see figure 11).

3.   **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

4.   Claim 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (US 6,567,408, Hereinafter, Li).

As for claim 1, Li shows (a) generating a first string (**src**) and a second string (**dst**) with which to characterize the PDU (**Col. 10 line 25-27**); (b) determining a first index associated with the first string and a second index associated with the second string (**Col. 10 line 28-40**), wherein the first index and second index are selected from a plurality of indices (**Col. 10 line 28-40**), and (c) selecting an action from a plurality of actions based on tile first index and the second index (**Col. 10 line 28-40 and col. 11, lines 10-27**), each action being associated with two indices of the plurality of indices (**Col. 10 line 28-40**).

As for claim 2, Li shows PDU has one field (i.e. **Source address/destination address, Col. 7 line 35-50**) and the first string and second string each comprise one bit derived from the one fields of the PDU (**Col. 10 line 25-27**).

As for claim 3, Li shows the one field is selected from the group consisting of: source address (**Col. 10 lines 25-27**).

As for claim 4, Li shows wherein the first string comprises one bits selected from a destination address field of the PDU (**Col. 10 line 25-27**).

As for claim 5, Li shows the second string comprises one bits selected from a

source address field of the PDU **(Col. 10 line 25-27).**

As for claim 6, Li shows generating the plurality of actions from policies that

characterize a plurality of traffic flows **(Col. 12 lines 55-60).**

As for claim 7, Li shows using the indices as keys into a memory device **(Col.**

9 lines 15-18) comprising the plurality of actions **(Col. 10, lines 40-44).**

As for claim 8, Li shows instructions passing the PDU to a PDU destination

address and instructions to filter the PDU **(Cot. 6, lines 19-23, and Col. 7 lines**

49).

As for claim 9, Li shows one pointer to one instruction defining the manner in

which to process the PDU **(Col. 12 lines 55-68).**

As for claim 10, Li shows the PDU has one fields **(Col. 7, lines 35-50)** and

the step of determining a first index and the second index further comprises the

step of searching a tree **(Col. 9 lines 64),** wherein one fields of the PDU are

compared against the nodes of the tree **(Col. 10 lines 27-40).**

As for claim 11, Li shows the tree is a Patricia trie **(Col. 9 lines 64).**

As for claim 12, Li shows a string generator for generating a first string (src)

and a second string **(dst)** with which to characterize the PDU **(Col. 10 line 27);** and (b)

an index allocate for retrieving a first index associated with the first string **(Col. 10**

line 2740) and a second index associated with the second string, wherein the first

index and second index are selected from a plurality of indices **(Col. 7 lines 27-40);**

and (c) Li shows a memory device **(Memory within ESP24),** operatively coupled to

the index allocate **(Col. 9, line 15-20),** comprising a plurality of actions, each action

being selected based on two indices of the plurality of indices **(Col. 10 line 27-40).**

As for claim 14, Li shows the first string (src) and second string (dst) each comprise one bit derived from one field of the PDU **(Col. 7 lines 35-50)** and **(Col. 10 lines 25-27).**

As for claim 15, Li shows the one field is selected from the group consisting of: a source address **(Col. 7 lines 35-50).**

As for claim 16, Li shows the first string comprises one bit selected from a destination address field of the PDU **(Col. 10 lines 25-27).**

As for claim 17, Li shows the second string comprises one bit selected from a source address field of the PDU **(Col. 10 lines 25-27).**

As for claim 18, Li shows the plurality of actions is derived from policies that characterize a plurality of traffic flows **(Col. 12 lines 55-60).**

As for claim 19, Li shows the plurality of indices is keys into the memory device **(Col. 9 lines 15-18).**

As for claim 20, Li shows instructions for passing the PDU to a PDU destination address and instructions to filter the PDU **(Col. 6 lines 19-23 and Col. 7 line 49).**

As for claim 21, Li shows the actions further comprise one or more pointers to one instruction defining the manner in which to process the PDU **(Col. 12 lines 55-68).**

As for claim 22, Li shows the index allocates comprises a trie **(Col. 9 lines 64),** the trie comprising nodes against which one field of the PDU are compared **(Col. 10**

line 27-40).

5.   Claims 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by

Yazaki et al. (US 6,768,738, Hereinafter, Yazaki).

As for claim 23, Yazaki shows generating a first string **(Sip)** from source

information associated with the PDU **(Col. 15 line 40-44)**; (b) generating a

second string (DIP) from destination information associated with the PDU **(Col. 15**

line 40-44); (c) identifying a first QoS action from a plurality of QoS actions based on

the first string **(Col. 15 line 40-44)**; (d) identifying a second QoS action from a plurality

of QoS actions based the second string **(Col. 16 line 20-25)**; and (e) determining a

final QoS action from at least one of the first and second QoS actions **(Col. 16 line 27-**

28).

As for claim 24, Yazaki shows applying a hierarchical rule indicating which one

of the first and second QoS actions has precedence **(Col. 16 lines 27-28, figure 14)**.

6.   Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Yazaki in view of Tuck, III et al. (US 7,107,352, Hereinafter, Tuck).

As for claim 25, Yazaki does not show one of the first and second QoS actions

is a PDU pass action recommending that the PDU be forwarded, and one of the QoS

actions is a PDU drop action recommending that the PDU be filtered. However, Tuck

shows PDU pass action recommending that the PDU be forwarded **(Figure 2, Col. A**

row 1 show a pass), and one of the QoS actions is a PDU drop action

recommending that the PDU be filtered **(figure 2, Col. D row 1 show a drop).** It would

have been obvious to one of ordinary skill in the art at the time of the invention to modify

filtering of Yazaki with the pass/drop function of Tuck in order to indicate the QoS

function of different devices in the network.

As for claim 26, Yazaki does not show wherein the hierarchical rule indicates

that the PDU drop action has precedence over the PDU pass action. However, Tuck

shows the hierarchical rule indicates that the PDU drop action has precedence over the

PDU pass action **(Figure 2, Col. A row 1 shows a pass, Col. D row 1 shows a**

drop, and Col. PASS/DROP shows a drops, therefore drop action take

precedence over pass function). It would have been obvious to one of ordinary

skill in the art at the time of the invention to modify the QoS function of Yazaki with

Pass/Drop precedence of Tuck in order to relieve congestion of a receiving device.

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afsar M. Qureshi whose telephone number is (571) 272 3178. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Field Lynn can be reached on (571) 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AFSAR QURESHI
PRIMARY EXAMINER
1/15/2008